

CLAIMS

1. A process for preparing a conjugated polymer, which comprises polymerizing in a reaction mixture (a) an aromatic monomer having at least two boron derivative functional groups selected from a boronic acid group, a boronic ester group and a borane group, and an aromatic monomer having at least two reactive halide functional groups; or (b) an aromatic monomer having one reactive halide functional group and one boron derivative functional group selected from a boronic acid group, a boronic ester group and a borane group, wherein the reaction mixture comprises a catalytic amount of a catalyst suitable for catalysing the polymerisation of the aromatic monomers, and an organic base in an amount sufficient to convert the boron derivative functional groups into $-BX_3^-$ anionic groups, wherein X is independently selected from the group consisting of F and OH.
2. A process for preparing a conjugated polymer, which comprises preparing under non-polymerisation conditions an organic cation salt of an aromatic diboronate monomer by the reaction of an aromatic monomer having two boron-derivative functional groups with an organic base in an amount sufficient to convert the boron-derivative groups into boronate anionic groups ($-B(X)_3^-$) wherein X is independently selected from the group consisting of F and OH, and then polymerising the organic cation salt of the aromatic diboronate monomer with an aromatic monomer having two reactive halide functional groups in the presence of a catalyst suitable for catalysing the

polymerisation by elimination of a halide functional group and a boronate anionic group.

3. A process for preparing a conjugated polymer, which comprises preparing under non-polymerisation conditions an organic cation salt of an aromatic boronate monomer having a reactive halide functional group and a boronate anionic group ($-B(X)_2^-$) wherein X is independently selected from the group consisting of F and OH, and then polymerising the organic cation salt of the aromatic boronate monomer in the presence of a catalyst suitable for catalysing the polymerisation of the organic cation salt by elimination of a halide functional group and a boronate anionic group.
4. A process according to any of claims 1 to 3 wherein X is a hydroxyl group.
5. A process according to any preceding claim wherein at least 1.5 equivalents of said organic base per boron-derivative functional group is provided in the reaction mixture.
6. A process according to claim 5 wherein at least two equivalents of said organic base per boron-derivative functional group is provided in the reaction mixture.
7. A process according to any preceding claim wherein the organic base is selected from the group consisting of tetraalkylammonium carbonates, tetraalkylammonium bicarbonates and alkylammonium hydroxides.
8. A process according to claim 7 wherein the organic base comprises $R'R''R'''R''''NOH$, wherein R' is a C_1 - C_6 alkyl group, and R'' , R''' and R'''' are each independently hydrogen atoms or C_1 - C_6 alkyl groups.

9. A process according to claim 8 wherein the organic base is selected from $(\text{CH}_3)_4\text{NOH}$, $(\text{C}_2\text{H}_5)_4\text{NOH}$ and $(\text{C}_3\text{H}_7)_4\text{NOH}$.
10. A process according to any one of claims 1 to 5, wherein the organic base is a tetraalkylammonium carbonate or a tetraalkylammonium bicarbonate.
11. A process according to any preceding claim wherein the organic base is used in combination with an aqueous solution of an inorganic base.
12. A process according to claim 11 wherein the inorganic base is NH_4OH .
13. A process according to any preceding claim wherein the reaction is carried out in the absence of alkali metal cations.
14. A process according to any preceding claim, wherein at least one of the aromatic monomers is a 2,7(9,9-di-n-octylfluorene).
15. A process according to any of claims 1 to 3 wherein a solvent which is miscible with water and in which the reactive components are soluble is used.
16. A process according to any preceding claim wherein the catalyst is a palladium catalyst.
17. A process according to any preceding claim, wherein the polymerising conditions are such that the polymer produced is a semiconductive conjugated polymer.
18. A process according to claim 17, wherein the semiconductive conjugated polymer is a luminescent polymer.
19. A process for the production of an optical device or a component for an optical device, which comprises providing a substrate and producing a polymer in accordance with the process of any one of the

20. A process according to claim 19, wherein the optical device comprises an electroluminescent device.

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Year	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
Population	1,000,000	1,050,000	1,100,000	1,150,000	1,200,000	1,250,000	1,300,000	1,350,000	1,400,000	1,450,000	1,500,000	1,550,000	1,600,000	1,650,000	1,700,000	1,750,000	1,800,000	1,850,000	1,900,000	1,950,000	2,000,000	2,050,000	2,100,000	2,150,000	2,200,000	2,250,000	2,300,000	2,350,000	2,400,000	2,450,000	2,500,000	2,550,000	2,600,000	2,650,000	2,700,000	2,750,000	2,800,000	2,850,000	2,900,000	2,950,000	3,000,000	3,050,000	3,100,000	3,150,000	3,200,000	3,250,000	3,300,000	3,350,000	3,400,000	3,450,000	3,500,000	3,550,000	3,600,000	3,650,000	3,700,000	3,750,000	3,800,000	3,850,000	3,900,000	3,950,000	4,000,000	4,050,000	4,100,000	4,150,000	4,200,000	4,250,000	4,300,000	4,350,000	4,400,000	4,450,000	4,500,000	4,550,000	4,600,000	4,650,000	4,700,000	4,750,000	4,800,000	4,850,000	4,900,000	4,950,000	5,000,000	5,050,000	5,100,000	5,150,000	5,200,000	5,250,000	5,300,000	5,350,000	5,400,000	5,450,000	5,500,000	5,550,000	5,600,000	5,650,000	5,700,000	5,750,000	5,800,000	5,850,000	5,900,000	5,950,000	6,000,000	6,050,000	6,100,000	6,150,000	6,200,000	6,250,000	6,300,000	6,350,000	6,400,000	6,450,000	6,500,000	6,550,000	6,600,000	6,650,000	6,700,000	6,750,000	6,800,000	6,850,000	6,900,000	6,950,000	7,000,000	7,050,000	7,100,000	7,150,000	7,200,000	7,250,000	7,300,000	7,350,000	7,400,000	7,450,000	7,500,000	7,550,000	7,600,000	7,650,000	7,700,000	7,750,000	7,80																																																																